Jet Propulsion Laboratory
California Institute of Technology

PDS Registry and Search

Jordan Padams, Dan Crichton, Steve Hughes

IPDA Steering Committee

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Registry/Search Upgrade

- Full product labels will get stored under a Registry Index in Solr
  - Old registry only stored product metadata
  - Harvest Tool was updated to support this feature
  - Will improve re-indexing performance

- Improved performance over the old Registry

- Initial Metrics ingesting 1 million products
  - Ingest took about 14 hours (old version ~= several days)
  - Data Footprint
    - Harvest Intermediate Data: ~4.1 GB
    - Registry Index (where the product labels reside): ~3.3 GB
    - Search Index (where search product metadata resides): ~445 MB
    - Total Footprint: 7.8 GB

https://pds-engineering.jpl.nasa.gov/content/pds4-software

Data Search APIs

- PDS Search Protocol
  - https://planetarydata.org/projects/active-projects/registration-and-search/pds-search-protocol/pds-search-protocol/view

- PDAP Search Protocol
  - https://planetarydata.org/projects/active-projects/registration-and-search/pds-search-protocol/pds-pdap-search-protocol/view

PDS Search Protocol: https://pds.nasa.gov

Attribute	Description	Example
identifier	Search for products with a specific logical identifier (LID).	identifier:urn:nasa:pds:maven.iuvs.raw:echelle
instrument	Search for products with a specified instrument name.	instrument:instrument_name:IMAGING ULTRAVIOLET SPECTROGRAPH
instrument-host	Search for products with a specified instrument host.	instrument-host:MAVEN
instrument-host-type	Search for products with a specified instrument host type.	instrument-host-type:Spacecraft
instrument-type	Search for products with a specified instrument type.	instrument-type:Imager
investigation	Search for products with a specified investigation (mission) name.	investigation:Galileo
observing-system	Search for products with a specified observing system name.	observing-system:Pathfinder-IMP
product-class	Search for products with a specific PDS4 Product Class name (Product_Bundle, Product_Collection, etc).	product-class:Product_Collection
target	Search for products with a specified target name.	target:MARS
target-type	Search for products with a specified target type.	target-type:Planet
title	Search for products with a specified value within the title field of a product.	title:Bundle
start-time	Search for products within a specified start datetime range. Datetime format should be in ISO-8601 format.	start-time:[2008-05-01T00:00:00.000z to 2008-06-01T00:00:00.000Z]
stop-time	Search for products within a specified stop datetime range. Datetime format should be in ISO-8601 format.	stop-time:[2008-05-01T00:00:00.000z to 2008-06-01T00:00:00.000Z]

Example Searches

- https://pds.nasa.gov/datasearch/keyword-search/

- Search for "agency:ESA"

Refine Your Search

Target

Planet (868)

Calibration (200)

Other (76)

Comet (31)

Satellite (31)

Asteroid (27)

Investigation

Mars Express (2973)

International Rosetta Mission (2209)

Venus Express (448)

Small Missions For Advanced Research And Technology (26)

Giotto (10)

Cassini-Huygens (9)

Bepicolombo (6)

Earth (6)

Exomars 2016 (6)

HST (2)

Instrument

Radio Science (2854)

Camera (104)

Spectrometer (32)

Plasma Analyzer (30)

Magnetometer (16)

Other (8)

Imaging Spectrometer (3)

Dust Analyzer (2)

Photometer (2)

Search Results

agency:esa | Search |

1–50 of **5695 results** (0.001 seconds)

Data Sets and Information

Data Set: MARS EXPRESS HRSC MAP PROJECTED REFDR V2.0
HIGH RESOLUTION STEREO CAMERA
MARS EXPRESS - MEX-M-HRSC-5-REFDR-MAPPROJECTED-V2.0 - starting 2004-01-10T13:50:36.474Z

Data Set: MARS EXPRESS MARSIS RDR ACTIVE IONOSPHERE SOUNDING EXT3 V1.0
This data set contains the Mars Express MARSIS Active Ionospheric Sounder data from orbit 7690 through the end of the third extended mission. The data are fully calibrated in units of spectral density.
MARS EXPRESS - MEX-M-MARSIS-3-RDR-AIS-EXT3-V1.0 - starting 2010-01-01T00:00:00Z

Data Set: MARS EXPRESS MARS MRS NEAR EARTH VERIFICATION 0001 V1.0
This is a Mars Express Radio Science data set, collected during the near earth verification phase 2003-06-02 to 2003- 07-31. It is a Commissioning measurement and covers the time 2003-06-29T14:44:10.000 to 2003-06-30T00:56:13.000.
MARS EXPRESS - MEX-M-MRS-1/2/3-NEV-0001-V1.0 - starting 2003-06-29T14:44:10Z

Data Set: MARS EXPRESS ASPERA-3 RAW EDR ELECTRON SPECTROMETER V1.0
This data set contains Mars Express ASPERA-3 Electron Spectrometer (ELS) data from launch (June 2, 2003) to the end of mission. The data are provided in raw units of counts/accumulation.
MARS EXPRESS - MEX-M-ASPERA3-2-EDR-ELS-V1.0 - starting 2003-06-02T17:45:00Z

Data Set: MEX EXT 3 SPICAM MARS IR EDR-RAW V1.0
Mars Express SPICAM level 0B IR dataset
MARS EXPRESS - MEX-M-SPI-2-IREDR-RAWXMARS-EXT3-V1.0 - starting 2007-08-27T12:57:49Z

Data Set: MARS EXPRESS HRSC MAP PROJECTED REFDR V1.0
Map Projected HRSC data from the High Resolution Stereo Camera on Mars Express.
MARS EXPRESS - MEX-M-HRSC-5-REFDR-MAPPROJECTED-V1.0 - starting 2004-01-10T13:50:36.474Z

Data Set: MARS EXPRESS MARS MARSIS EXPERIMENT DATA RECORD V1.0
This data set contains the CODMAC Level 2 MARSIS data for the Mars Express mission
MARS EXPRESS - MEX-M-MARSIS-2-EDR-V1.0 - starting 2005-06-01T00:00:00Z

Data Set: MEX SPICAM CRUISE/MARS IR EDR-RAW V1.1
Mars Express SPICAM level 0B IR dataset
MARS EXPRESS - MEX-Y/M-SPI-2-IREDR-RAWXCRU/MARS-V1.1 - starting 2003-06-19T19:37:58.4Z

Data Set: MARS EXPRESS MARS MARSIS REDUCED DATA RECORD SUBSURFACE V1.0
This data set contains the CODMAC Level 3 MARSIS data for the Mars Express mission
MARS EXPRESS - MEX-M-MARSIS-3-RDR-SS-V1.0 - starting 2005-06-01T00:00:00Z

Registry Search: https://pds.nasa.gov/services/search/search?wt=json&q=agency:esa

```
- response: {
    numFound: 5702,
    start: 0,
    maxScore: 0.0063090157,
  - docs: [
    - {
      - confidence_level_note: [
          "UNK"
        ],
      - investigation_name: [
          "MARS EXPRESS"
        ],
      - form-investigation: [
          "MARS EXPRESS"
        ],
      - instrument_host_name: [
          "MARS EXPRESS"
        ],
      - form-instrument-host: [
          "MARS EXPRESS"
        ],
      - stop_time: [
          "3000-01-01T00:00:00Z"
        ],
      - target_name: [
          "MARS",
          "DEIMOS",
          "PHOBOS"
        ],
      - form-target: [
          "MARS",
          "DEIMOS",
          "PHOBOS"
        ],
      - data_set_name: [
          "MARS EXPRESS HRSC MAP PROJECTED REFDR V2.0"
        ],
      - form-data-set-name: [
          "MARS EXPRESS HRSC MAP PROJECTED REFDR V2.0"
        ],
      - description: [
          "HIGH RESOLUTION STEREO CAMERA"
        ],
      - instrument_type: [
          "CAMERA"
        ],
      - form-instrument-type: [
          "CAMERA"
        ],
      - abstract_text: [
          "Unknown"
        ],
        title: "MARS EXPRESS HRSC MAP PROJECTED REFDR V2.0",
        resLocation: "/ds-view/pds/viewDataset.jsp?dsid=MEX-M-HRSC-5-REFDR-MAPPROJECTED-V2.0",
```

Questions/Comments

Backup

Approved and Implemented SCRs

SCR	Description
CCB-195	Update Information Model to Improve International Interoperability
CCB-202	Amend the Instrument class context product
CCB-203	Define and enforce constraints on local dictionaries
CCB-214	Optional trailing zeroes in ASCII_Real for Table_Character
CCB-227	Missing Requirements in Source_Product_External
CCB-235	Add data type ASCII_BibCode
CCB-238	Need the capability to associate Thumbnail products to other types of products
CCB-240	Add Units_of_Energy as a unit of measure.
CCB-242	Add 'Field Campaign' to Investigation Type
CCB-243	Consolidate Context Target Types for Samples
CCB-245	Deprecate 'Airborne' as an independent host type
CCB-246	Deprecate 'Sun' as a separate context target.
CCB-247	Undeprecate "Radio Science" as a Value for Instrument.type
CCB-248	Bundle_Member_Entry is missing a reference_type for miscellaneous collections